

CLAIMS:

1. Method for storing information in a storage device (100, 200, 300),
the storage device comprising a two-dimensional array of electro-magnetic sensor elements (101) that are sensitive at a sensor surface (106) to electro-magnetic material (104, 110, 112, 114, 202) within a near field working distance (105), the method for storing information
5 comprising a step of:
 - depositing the electro-magnetic material (104, 110, 112, 114, 202) in a pattern on the sensor surface (106), the pattern representing the information.
2. Method for storing information in a storage device (100, 200, 300) as claimed
10 in claim 1, wherein the method further comprises a step of
 - aligning the pattern of electro-magnetic material (104, 110, 112, 114, 202) to correspond to the array of electro-magnetic sensor elements (101).
3. Method for storing information in a storage device (100, 200, 300) as claimed
15 in claim 1, wherein the method comprises a printing step for depositing the electro-magnetic material (104, 110, 112, 114, 202).
4. Method for storing information in a storage device (100, 200, 300) as claimed
in claim 1, wherein the method comprises a stamping step for depositing the electro-magnetic
20 material (104, 110, 112, 114, 202), in particular a finger.
5. Method for storing information in a storage device (200) as claimed in claim
1, the storage device (200) having a cover layer (201) providing the sensor surface (106),
wherein the step of depositing electro-magnetic material (202) in a pattern comprises:
25
 - depositing a layer of electro-magnetic material (202) on the sensor surface (106), and
comprises
 - creating a pattern of depressed portions (205) into the cover layer (201) whereby the sensor surface (106) in the depressed portions (205) is within the near field working distance (105)

and the sensor surface (106) outside the depressed portions (205) is outside the near field working distance (105).

6. Method for storing information in a storage device (300) as claimed in claim 1
5 the storage device (300) having a cover layer (201) providing the sensor surface (106),
wherein the method for storing information comprises a step of
- embedding the electro-magnetic material (104) into the cover layer.

7. Method for storing information in a storage device (100, 300) as claimed in
10 claim 1, wherein the step of depositing electro-magnetic material in a pattern comprises:
- depositing a pattern comprising at least two types of electro-magnetic material (104, 110),
the types of electro-magnetic material (104, 110) representing different values to the sensor
elements (102, 103).

15 8. A storage device comprising a two-dimensional array of electro-magnetic
sensor elements (101) that are sensitive at a sensor surface (106) to electro-magnetic material
(104, 110, 112, 114, 202) within a near field working distance (105), wherein the sensor
surface (106, 107) is arranged for depositing the electro-magnetic material (104, 110, 112,
114, 202).

20 9. A storage device (100, 200, 300) as claimed in claim 8, wherein the sensor
elements (102, 103) are arranged for sensing a value in a range of values depending on an
amount of electro-magnetic material (104, 112) within the near field working distance (105).

25 10. A storage device (100, 200, 300) as claimed in claim 8, wherein the sensor
elements (102, 103) are arranged for detecting the presence of the electro-magnetic material
(104, 110, 112, 114, 202) in at least one of the following ways:
- generating a magnetic field and detecting the magnetic field as influenced by the presence
of absence of the electro-magnetic material via a soft magnetic property; or
30 - generating an electrical field and detecting the electrical field as influenced by the presence
or absence of the electro-magnetic material via a capacitive coupling; or
- generating a fluctuating magnetic field and detecting the magnetic field as influenced by the
presence of absence of the electro-magnetic material via eddy currents.

11. A storage device (100, 200, 300) as claimed in claim 8, wherein electro-magnetic material (104, 110, 112, 114, 202) is deposited on the sensor surface (106) in a pattern, the pattern representing the information.

- 5 12. Method for manufacturing a storage device (100, 200, 300) as
claimed in claim 8, comprising a step of
- manufacturing a two-dimensional array of electro-magnetic sensor elements (101) that are
sensitive at a sensing surface (106) to electro-magnetic material (104, 110, 112, 114, 202)
within a near field working distance (105), and further comprising a step of
10 - preparing the sensor surface (106, 107) for depositing electro-magnetic material (104, 110,
112, 114, 202).

13. Method for manufacturing a storage device (100, 200, 300) as
claimed in claim 12, wherein the method further comprises a step of
15 - applying a cover layer (201) for providing the sensing-surface (106).

14. Printing fluid for use in the method for storing information in a storage device
(100, 200, 300) as claimed in claim 1,
the printing fluid comprising the electro-magnetic material (104, 110, 112, 114, 202) for
20 depositing the pattern on the sensor surface (106).